

In the United States Patent and Trademark Office

Date: February 13, 2008

In re Application of: Shigeo Azuma

Filed: December 3, 2003

For: Machine Translation of Chat Room Sessions and Other Collaborative Work Using
Session-Specific Dictionaries

Serial Number: 10/726,443

Art Unit: 2626

Examiner: Godbold, Douglas

Appellant's Brief - Amended (37 CFR 41.37)

Hon. Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Brief is filed in support of a Notice of Appeal filed on November 19, 2007. The appeal is from a Final rejection having a Notification Date of August 28, 2007. Please charge the fees required for filing of this brief against Deposit Account 09-461, which is maintained by International Business Machines Corporation, assignee of rights in the invention described and claimed in the above-identified application.

The Brief is believed to be timely filed as being filed within two months of the date of the Notice of Appeal.

Real Party in Interest (37 CFR 41.37(i))

The real party in interest in this appeal is International Business Machines Corporation, assignee of the entire right, title and interest in the above-identified patent application.

Related Appeals and Interferences (37 CFR 41.37(ii))

With respect to other prior or pending appeals, interferences, or judicial proceedings that are related to, will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such prior or pending appeals, interferences, or judicial proceedings known to Appellant, Appellant's legal representative, or assignee.

Status of Claims (37 CFR 41.37(iii))

1. Total number of claims pending in application

There are nine claims pending in the application, all of which involved in this appeal. Five of those claims (1, 3, 7, 10 and 13) are independent. Each of the remaining four claims depends directly from one of the independent claims.

2. Status of all claims in application

Claims canceled: 10 (claims 2, 4, 8, 9, 12 and 14-18).

Claims withdrawn from consideration but not canceled: None.

Claims pending: 1, 3, 5-7, 10, 11, 13 and 19.

Claims allowed: None.

Claims rejected: 1, 3, 5-7, 10, 11, 13 and 19.

Status of Amendments (37 CFR 41.37(iv))

All amendments submitted on behalf of Appellant in this case have been entered.

Summary of Claimed Subject Matter (37 CFR 41.37(v))

The invention relates generally to machine translation of messages exchanged during a collaborative session, one example of which is an instant messaging chat session, and particularly to the use of a temporary session-specific dictionary that is created at the beginning of a collaborative session and is deleted at the conclusion of the collaborative session.

Claim 1, an independent claim, is directed to a translation server that translates an entered text during a collaborative session, a term that is first used in paragraph [0002] of the subject application in referring to "a plurality of users" that "simultaneously use a system with several

languages in a chat room, where conversations are carried out in real time” The translation server is described in paragraph [0027] and in Figures 1, 3 and 4, among other places.

The translation server includes a translation processing unit (see Figure 3, element 20 and paragraphs [0034] and [0039]) that executes a text translation process as well as a dictionary storage unit that stores both a general (permanent) dictionary and a virtual or temporary dictionary file that is created at the start of a collaborative session (see paragraphs [0053] and [0054] and that is erased from the dictionary storage unit at the end of the collaborative session (see paragraph [0057]).

Claim 3, the next independent claim, is directed to a collaboration server for supporting a collaborative session involving terminals that exchange data via a network. See Figure 1 and paragraphs [0027] and [0028]. The collaboration server includes a session management unit (see Figure 5, element 210 and paragraph [0061]) and a translation processing unit (see Figure 5 and paragraphs [0061]-[0063]) for translating text entered during the collaborative session from a first language to a second language. The collaboration server also includes a dictionary management unit that creates a session-specific dictionary file at the start of the collaborative session and erases the created session-specific dictionary file at the end of the collaborative session. See paragraphs [0053], [0054] and [0057] and Figure 4.

Claim 7, the next independent claim, is directed to an information processor implementation of the present invention. The claim includes apparatus recitations for the translation processing unit (see Figure 3, element 20 and paragraph [0068], the dictionary storage unit (see Figure 3, element 40 and paragraph [0070]) and virtual dictionary storage unit (see Figure 3, element 44 and paragraph [0068]), all of which were previously discussed with reference to claims 1 and 3. Additionally, claim 7 recites an input means (see Figure 3, element 10 and paragraph [0034]) for entering a text in a first language and an output means (see Figure 3, element 50 and paragraph [0034]) for outputting the translated text created by the translation processing means.

Claim 10, the next independent claim, is directed to a machine translation method in which, at the start of a collaborative session, a session-specific dictionary file is created for use in a translation process executed during the collaborative session. See Figure 4, operation 402 and paragraph [0053]. The operation further includes the operations of registering a word and its usage in the dictionary file specific to the collaboration session (see Figure 4, operation 403 and

paragraph [0053]) and translating text entered during the session with reference to the session-specific dictionary file (see Figure 4, operation 405 and paragraph [0054]. The last operation in the method is erasing the registered word and its usage from the dictionary file at the end of the collaborative session. See Figure 4, operation 408 and paragraph [0057].

Claim 13, the last independent claim pending in the application, is directed to a computer program product that includes a computer usable medium embodying computer usable program code configured to perform operations discussed below. The computer usable medium may take different forms as long as those forms are capable of embodying computer usable program code. Examples of computer usable media include floppy drive 102, main memory 103 and hard disk 105, all of which are shown in Figure 2. Computer usable code is configured to, at the start of a collaborative session, create a dictionary file for use in a translation process executed during the collaborative session. See Figure 4, operation 402 and paragraph [0053]. Other code is configured to register a word and its usage in the created dictionary file (see Figure 4, operation 403 and paragraph [0053] and to translate text entered during the session by making use of the created dictionary file (see Figure 4, operation 405 and paragraph [0054]. Finally, the computer program product includes code that is configured to erase the registered word and its usage from the dictionary file when the collaborative session ends. See Figure 4, operation 408 and paragraph [0057].

Grounds of Rejection to be Reviewed on Appeal (37 CFR 41.37(vi))

1. Whether claims 1, 3, 5-7, 10, 11, 13, and 19 are unpatentable under 35 U.S.C. 103(a) over US Patent 5,295,068 - Nishino et al in view of US Patent 7,031,906 - Shimohata et al.
2. Whether claims 13 and 19 are unpatentable under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Arguments (37 CFR 41.37(vii))

First Argument: Claims 1, 3, 5-7, 10, 11, 13, and 19 are patentable under 35 U.S.C. 103(a) over US Patent 5,295,068 - Nishino et al (hereafter Nishino) in view of US Patent 7,031,906 - Shimohata et al (hereafter Shimohata)

Appellant acknowledges that the significant point of novelty in the application under appeal is the use of a session-specific translation dictionary that:

- 1) is created at the start of a collaborative session, e.g., an instant messaging system chat session;
- 2) is used during the collaborative session to translate text entered during the session from a first language to a second language; and
- 3) is erased at the end of the collaborative session.

While the claims on appeal fall with different statutory classes of subject matter (apparatus, method, article of manufacture) and recite different implementation environments (e.g., translation server, collaboration server, information processor) within a specific statutory class, every claim on appeal contains language that recites that point of novelty.

Referring to Claim 1, the claim recites, in relevant part, a translation server for translating text during a collaborative session and having a dictionary storage unit for storing “*a virtual dictionary file created at the start of the collaborative session, said virtual dictionary file being erased from said dictionary storage unit at the end of the collaborative session.*”

Neither of the Nishino and Shimohata references, taken individually, discloses the point of novelty identified above. There is no logical basis for combining the teachings of the references.

The Nishino patent teaches the use of a temporary dictionary file that can be used to facilitate the translation of e-mail messages. It is taught at multiple places in the Nishino specification that the temporary dictionary file of “private words” is created by an e-mail user as part of the process of creating an e-mail document. The temporary dictionary file is integrated into the document file and is transmitted with the document file to a translation server. Once the document is translated, post-processing is performed which removes the temporary dictionary from the translated result before the translated result is transmitted.

The Nishino patent neither discloses nor suggests the use of a virtual dictionary file that is created at the start of a collaborative session, remains available for use during the entire session and then is erased when the session ends.

An e-mail system of the type contemplated by Nishino is not even a session-based system, but rather an asynchronous system in which each user decides independently when and

for how long to use the system without regard to whether any other user is currently using the same system. The concept of “sessions” does not even come into play in an e-mail system of the type contemplated by Nishino.

The Shimohata patent does teach the use of user-specific dictionaries in a chat room session, which Appellant acknowledges meets the requirements of a collaborative session.

However, the Shimohata patent is extremely vague as to when the dictionaries are created and when they are erased. What Shimohata actually teaches that each terminal in a network can acquire a user-specific dictionary from every other terminal in the network and then make use of the terminal-specific dictionary in translating any messages originating from that terminal. See Column 14, lines 55+ of the Shimohata specification.

There is no language in Shimohata that indicates the user-specific dictionaries are acquired at the beginning of a collaborative session or are erased at the end of the collaborative session. To the contrary, there is language that suggests that the user-specific dictionaries are acquired by a terminal prior to the start of a collaborative session and maintained after the end of the collaborative session. At Column 16, lines 12+, the Shimohata specification discusses how user-specific dictionaries maintained at a terminal or behalf of a chat group can be updated. Unless the Shimohata user-specific dictionaries were persistent (i.e., created before the start of a collaborative session and/or maintained past the end of a collaborative session), there would be no apparent reason to be concerned about updating those dictionaries.

In any event, claims 1, 3-5,7,10-11, 13 and 19 do not stand rejected over Shimohata alone but over Nishino in view of Shimohata and there is no logic basis for attempting to combine the teachings of those two references. As noted earlier, the Nishino patent is directed to translations performed in an e-mail environment. As also noted earlier, an e-mail system of the type contemplated by Nishino is not a session-based system and does not involve collaborative sessions. The Shimohata patent is, on the other hand, directed solely to translations performed in a collaborative session environment.

It would not be obvious to one of ordinary skill in the art to transport any session-based concepts from Shimohata to the Nishino environment when the Nishino environment does not make use of sessions to begin with.

It is probably easier to see how the teachings of Nishino might be imported into the Shimohata environment. However, Nishino specifically teaches that a temporary dictionary is

attached to each message being transported through a network, used during translation of the message during transport and then discarded. That teaching is completely dissimilar to the idea that a temporary dictionary is created at the start of a collaborative session and erased at the end of the collaborative session.

It is submitted that Claim 1 defines subject matter that is not obvious over Nishino in view of Shimohata. It is further submitted that the Final rejection of this claim under 35 U.S.C. 103(a) is in error and should be reversed.

Since each of the remaining claims on appeal recites the same point of novelty as Claim 1, each is considered patentable for the same reasons as that claim. The Final rejections of all pending claims under 35 U.S.C. 103(a) is in error and should be reversed.

Second argument: Claims 13 and 19 are directed to statutory subject matter
and fall within the statutory classes defined in 35 U.S.C. 101.

Claims 13 and 19 are directed to a computer program product including a computer usable medium having computer usable program code embodied therewith. The Final rejection takes a position that “a mere computer readable medium that is not specifically a storage medium can be interpreted as a magnetic carrier wave, which is non-statutory under 35 U.S.C. 101.”

It is submitted that the position taken in the Final rejection is in error and at odds with ANNEX IV “Computer-Related Nonstatutory Subject Matter” in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility issued in November 2005.

Those guidelines distinguish between the treatment that is to be given to “functional descriptive material” as opposed to “nonfunctional descriptive material”, defining the former as “data structures and computer programs which impart functionality when employed as a computer component.” The ANNEX goes on to note that “[w]hen functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionality interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.” (emphasis added).

It will be noted that the focus is not on the length of time the functional descriptive material is resident in the medium but on whether or not the “use of technology permits the function of the descriptive material to be realized”.

The language of claims 13 and 19 recognizes the significance of permitting the function of program code embodied in a medium to be realized. Note that the medium itself is characterized as a computer usable medium. Note that the embodied program code is characterized as computer usable program code.

A later section of ANNEX IV further substantiates a position that there is no requirement under 35 U.S.C. 101 that functional descriptive material, such as computer usable program code, be resident in an embodying medium for any minimum length of time. In a section that discusses the patentability of computer programs claimed as computer listings per se, the ANNEX notes that computer listings per se do not meet the requirements for functional descriptive material and then goes on to state:

“In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional relationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory.”

It is significant that the quote does not refer to a computer storage medium, but instead to a computer-readable medium.

It is submitted that the position taken in the Final rejection is in error and should be reversed.

Respectfully submitted,

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Claims Appendix (37 CFR 41.37(viii))

1. A translation server for translating an entered text and providing a translated text during a collaborative session, comprising:

a translation processing unit for executing a text translation process; and

a dictionary storage unit for storing a general dictionary file referred to in the text translation process and a virtual dictionary file created at the start of the collaborative session for use in the text translation process only during the collaborative session, said virtual dictionary file being erased from said dictionary storage unit at the end of the collaborative session.

3. A collaboration server for supporting a collaborative session with a plurality of terminals exchanging data via a network, comprising:

a session management unit for managing a collaborative session with the plurality of terminals;

a translation processing unit for translating a text in a first language entered during the collaborative session with a first terminal into a second language used in a second terminal participating in the collaborative session; and

a dictionary management unit for creating a session-specific dictionary file at the start of the collaborative session for use by the translation processing unit only during the session, said dictionary management unit causing the session-specific file to be erased at the end of the collaborative session.

5. The collaboration server according to Claim 3, wherein the dictionary management unit creates, at the start of a collaborative session, a session-specific dictionary file for each terminal participating in the collaborative session and causes each created session-specific file to be erased at the end of the collaborative session.

6. The collaboration server according to Claim 3, wherein the dictionary management unit creates a session-specific dictionary file corresponding to a user when the user enters the collaborative session and erases the session-specific dictionary file when the user exits the collaborative session.

7. An information processor, comprising:

input means for entering a text in a first language;

translation processing means for translating the text into a second language to create a translation text;

dictionary storage means for storing a general dictionary file referred to in the translation process executed by the translation processing means;

virtual dictionary storage means for storing a virtual dictionary file for use in the translation process executed by the translation processing means for the duration of a collaborative session; and

output means for outputting the translated text created by the translation processing means.

10. A machine translation method for translating a text in a first language into a second language, comprising the steps of:

at the start of a collaborative session of two or more users, creating, in a memory, a dictionary file for use in a translation process executed during the collaborative_session, the dictionary file being specific to the collaborative session;

registering a word and its usage in the dictionary file specific to the collaborative session;

translating text entered during the session referring to the dictionary file specific to the collaborative session; and

erasing the registered word and its usage from the dictionary file at the end of the collaborative session.

11. The machine translation method according to Claim 10, wherein translating text entered during the session referring to the dictionary file specific to the session gives higher priority to the dictionary file specific to the collaborative session than to a general dictionary file.

13. A computer program product for causing a computer to translate a text in a first language into a second language, the computer program product comprising:

a computer usable medium having computer usable program code embodied therewith comprising:

computer usable program code configured to create, in a memory, when a collaborative session begins, a dictionary file specific to the collaborative session, for use in a translation process executed during the collaborative session;

computer usable program code configured to register a word and its usage in the dictionary file specific to the collaborative session; and

computer usable program code configured to translate text entered during the collaborative session, referring to the dictionary file specific to the collaborative session created when the collaborative session starts; and

computer usable program code configured to erase the registered word and its usage from the dictionary file at the end of the collaborative session.

19. A computer program product according to claim 13 wherein the computer usable program code configured to translate text entered during the collaborative session, referring to the dictionary file specific to the collaborative session created when the collaborative session starts further comprises computer usable program code configured to give higher priority to the dictionary file specific to the session than to a general dictionary file.

Evidence Appendix (37 CFR 41.37(ix))

None

Related Proceedings Appendix (37 CFR 41.37(x))

None